5/10/16 Call with Everbridge and FCC

Meeting Attendees:

- FCC: James Wiley, Rasoul Safavian and Greg Cooke
- Everbridge: Tom Crane, Nelson Daza and Katherine Chu

Conversation Notes:

Discussion Topic #1: Character Limit

James: While Participating CMS Providers generally agree that expanding the maximum character length to 360 is feasible on 4G LTE networks, they also agree that that legacy networks cannot support 360-character messages, including by concatenating multiple 90-character messages. Most emergency managers treating the issue state that, while it may be inconvenient and cause message delivery delays, they would be willing to initiate both 90- and 360-character messages until Participating CMS Providers can support 360-character messages on all of their networks.

- Could your software support taking a single 360-character message crafted by an alert originator and breaking it into up to four 90-character segments for transmission to FEMA IPAWS? What, if any, changes to your software would be necessary to enable this functionality, and how long would these changes take to complete?
- How, if at all, could your alert origination software help to overcome any challenges that have been identified with message concatenation (*i.e.*, the possibility that some message segments would be received out of order, or not at all, increasing message delivery latency).
- Is there any limit to the number of characters that your software could support including in a WEA Alert Message?

Nelson:

- It makes more sense if IPAWS gateway accepts any length message and parses the message as needed by the CMAS/WEA application within IPAWS; burden of maintenance for vendors can be avoided if parsing rule changes over time.
- XML is an extensible scripting language that would allow alerts to be originated in such a manner that would allow separate message pieces to be transmitted and associated.
- Everbridge software could parse a message into required pieces given appropriate lead time and provide the pieces in the required order within the XML document; Everbridge recommends IPAWS consider implementing a sequencing attribute so the consuming applications downstream know the order in which to concatenate the message pieces.
- 1 year would be sufficient lead time to implement software upgrades FCC rules require.
- Software could support a single message length up to 2,500 bytes.

Discussion Topic #2: Embedded References

James: While the majority of alert originators recognize the value of embedded references in WEA Alert Messages, and particularly in AMBER Alerts, participating CMS Providers have expressed concerns about the risks of network congestion that such an approach may pose.

- Could your software determine whether access to a web resource provided by a hyperlink embedded in a WEA Alert Message would require the download of data that exceeded a certain threshold (*e.g.*, could it be programmed to process as valid an alert message that contained a URL only so long as that URL linked the recipient to a web resource that would require less than a 25kb download). If so, what, if any, changes to your software would be necessary to enable this functionality, and how long would these changes take to complete?
- How should the Commission consider defining a “low-bandwidth” **embedded reference** for the purpose of WEA?

Nelson:

- Embedding URLs in SMS messages is a tried and true technique for providing access to additional information.
- Our Nixle product does this in markets as large as Los Angeles County with no complaints from mobile phone companies or message recipients.
- We could inspect the webpage behind a URL to determine whether it exceeded a certain threshold, but we would not advise doing so because we don't want anything to interfere with getting critical messages out as quickly as possible. Technically, inspecting URL size could be done very quickly/instantly.
- In addition, web page size is not static as content could be modified just after messages are sent to provide more detail to message recipients.
- Mobile phone browsers and devices are accommodating larger and larger files and web pages, so this should not be a concern.
- Network congestion has not been an issue.

Discussion Topic #3: Multilingual

James: Commenters generally agree that support for Spanish-language alerts is supported by current standards, but that requiring support for additional languages is not yet appropriate.

- What is your experience with machine-based translation? Can you help us to develop the record on the quality of machine translation technologies available today, and on the extent to which machine translation is available to alert originators as part of the alert origination software that you offer?
- Short of accurate machine translation, are there any changes to alert origination software that might facilitate the transmission of WEA Alert Messages in multiple languages simultaneously?

Nelson:

- We do not recommend automated text translation for emergency notifications as these technologies are not accurate.
- We have performed a number of tests with the results verified by certified linguists, who have recommended against this approach for critical or emergency notifications.
- There is very high risk that a message could be translated in a way that provides inaccurate or inappropriate information or instructions.
- We have not implemented a text language translation capability, but we continue to monitor this space for developments.
- However, alert originators can currently write and send messages in any language, and voice calls can include language accents using a text to speech conversion application.

Discussion Topic #4: Multimedia

James: The majority of commenters agree that multimedia messaging is not feasible at this time using WEA cell broadcast technology. Many recommend further research of Multimedia Broadcast Multicast Service (eMBMS) to enable this capability.

- Is your alert origination software currently able to support the transmission of multimedia content in WEA Alert Messages? If not, what, if any, changes to your software would be necessary to enable this functionality, and how long would these changes take to complete?

Nelson:

- Files can be attached, but it is not a good practice to attach large files – message delivery speed can be slowed. Year after year people are using bigger and bigger files. These can burden the network. We would need to set a limit on size, and cache content.

- We recommend our clients to include a URI in the notification that points to a location containing any type of content the recipients can open on their devices at their discretion.

Discussion Topic # 5: Geo-targeting

James: Most commenters agree that geo-targeting to an area that "best approximates" the target area is feasible using network-based approaches to geo-targeting.

- If we were to consider the feasibility of a device-based solution that required target area coordinates to be sent along with a WEA Alert Message, what, if any, changes to your software would be necessary to enable this functionality, and how long would these changes take to complete?

Nelson:

- It is not a problem from an alert origination software perspective to send geographic coordinates to the mobile device.

Discussion Topic #6: State/Local WEA Tests

James: To what extent do State/Local WEA Tests present an opportunity to include communities with special language needs in the WEA testing paradigm? To what extent do they provide an appropriate opportunity for evaluating the accuracy of translation technologies?

Tom: WEA tests could be sent to communities that largely speak other languages and this could be a useful testing/training opportunity.

Discussion Topic #7: Performance Reporting

James: Many CMS Providers state that they already log alerts, but most commenters agree that collecting and aggregating test reports on the accuracy of geo-targeting and the extent of alert delivery latency from the mobile device would not be feasible.

- To what extent could your alert origination software receive and aggregate data about Alert Message geo-targeting and time of receipt in order to produce reports for alert originator review?
- How would it be feasible for your software to receive such data?

Katherine:

- Yes, alert origination software could receive reports from CMS Providers if CMS providers were able to generate the data and share it. This would be great. It's something that our consumers demand. Specifically, confirming the exact area that was reached with geo-targeted messages data and data on the aggregate number of devices that received the alert would be very helpful. Latency data would be helpful as well.